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## THE PREVENTION OF ROCKY MOUNTAIN SPOTTED FEVER

A very few years ago it was thought that Rocky Mountain spotted fever occurred only west of the Mississippi River. However, in 1930 research workers of the Public Health Service discovered that this disease was also present in some of the Eastern States, particularly those of the Atlantic seaboard. So far the disease has not been recognized in the New England States.

Rocky Mountain spotted fever is transmitted to man by the bite of infected ticks. Several species of ticks are able to harbor the infection, but the two species responsible for the great majority of the human cases are the *Dermacentor andersoni*, or wood tick of the Northwest, and the *Dermacentor variabilis*, or common dog tick of the East. Apparently not many of the ticks are infected with spotted fever, but the disease in man is serious enough to warrant the practice of precautionary measures.

Ticks appear early in the spring, are most numerous during May, June, and July, and disappear rapidly in August. The tick season is a little earlier in the West than in the East.

When the ticks appear, they are unfed and are seeking some animal in order that they may attach themselves and suck blood. They crawl up on long grass and bushes and wait for some animal, wild or domestic, to pass. When the tick drops on an animal, including man, it does not start feeding at once but usually spends some time in searching for a suitable place. The hairy parts, especially along the back of the head or in the armpits, are often chosen by the tick. Experiments have shown that a previously unfed infected tick may attach to the body and feed for a few hours without transmitting the infection; but it then becomes highly infectious.

A vaccine has been prepared by the Public Health Service which is of value in the prevention of spotted fever.

There are three measures which we, as individuals, may use to prevent spotted fever: (1) Avoid ticks; (2) remove ticks from the person as early as possible; (3) be vaccinated.

On camping trips, if it is necessary to sleep in the open, care should be used in selecting a site for placing the bed, as ticks will crawl into a bed laid on the ground. Since ticks are usually most numerous where rodents are most abundant, areas well populated with rodents should be avoided. The safest camping ground is undoubtedly in standing timber where low vegetation is scanty. Proximity to trails and old

roads should be avoided. In sage-brush sections, avoid the sage brush. Avoid brushy areas along streams as camping grounds. The dog tick is far more likely to be present along the course of streams than is the wood tick.

Persons should be especially watchful when walking along trails. Ticks tend to concentrate on vegetation along the sides of trails and in the bushes along the edge of wooded areas. Similarly, vegetation along roadsides and grassy strips in the middle of little used roads are often very dangerous. It is especially desirable to watch the clothing when following trails or old roads.

In the prevention of tick bite, the first precaution is the wearing of such clothing as will prevent ticks from getting underneath. This may be accomplished to a considerable extent by wearing high boots, leggings, puttees, or socks that are worn outside the trousers legs. With such precautions taken, most ticks will crawl up the outside of the clothing and can be removed from the neck when contact with the skin makes their presence known. Passing the hand over the neck occasionally to feel for ticks is a good habit to acquire.

Ticks are far more likely to secure a hold on rough clothing than on clothing of smoother texture. There are advantages in both, however. Fewer ticks secure a hold on smooth clothing; but, on the other hand, on cloth with a heavy nap their movements are impeded and are necessarily much slower. If the legs of the trousers are carefully watched, most ticks can be picked off soon after they catch hold.

In spite of precautions, however, a certain number of ticks will reach the body through the various openings in the clothing. It is therefore important that the above precautions be supplemented by the examination of the inside of the clothing and of the body. Since ticks seldom attach immediately (unless late in the season), and are seldom infectious until after having been attached for a few hours, such examinations made twice each day (early afternoon and on retiring) should ordinarily be sufficient. In heavily tick-infested areas, however, or in sections known to be particularly dangerous, more frequent examinations should be made. When retiring, a complete removal of the clothing is desirable. Both clothing and body should be examined carefully and, if possible, any clothing not worn at night should be so placed that any undiscovered ticks will be unlikely to crawl from the clothing to the bed. If two or more persons are together, they should assist one another in the examination. If the person is alone, the back and other portions of the body that cannot be seen should be explored with the hands, paying particular attention to the hairy portions.

Ticks may be removed from man and domestic animals with the fingers, but a better plan is to use a pair of small forceps or tweezers. With these the tick may be seized by the head, close to the skin, and

easily removed. There is no danger of leaving the tick's head embedded in the skin. Care should be exercised against crushing the tick, as the contents of infected ticks are dangerous. After removing or handling ticks, the hands should be washed thoroughly with soap and water.

Two or three inoculations of the vaccine give a degree of protection usually sufficient to last through one tick season, but the immunity apparently is not permanent. Occasional cases of spotted fever have developed in vaccinated persons, but the vaccine apparently lessens the severity of the disease and seems to insure recovery. For its full protective value the vaccine should be taken at least 10 days before exposure to tick bite. The vaccine is of no value in the treatment of spotted fever.

### TRENDS IN DIPHTHERIA MORTALITY

By EDWARD A. LANE, M.D., M.P.H., *Director of Communicable Disease Control  
Westchester County (N.Y.) Department of Health*

Diphtheria mortality statistics for the 10 States admitted to the death registration area up to and including 1900 were assembled in order to study recent trends in those areas. The earliest years for which such data were found to be available are as follows: Massachusetts, 1842; Vermont, 1857; Michigan, 1874; New Jersey, 1879; New Hampshire, 1884; Connecticut, 1885; New York, 1885; Maine, 1892; Rhode Island, 1894; and Indiana, 1900 (table 1).

Two periods were selected, namely, from 1895 to 1911 and from 1900 to 1927. The trend in the earlier period could not be compiled for Indiana because of insufficient data. It will be noted that the later period terminates for Maine with the year 1926, while that for Massachusetts extends to 1928. The two periods were selected because (1) diphtheria mortality statistics for Rhode Island and Indiana were not available prior to 1894 and 1900, respectively; (2) with lower rates in more recent years it seemed advisable to make the later period longer than the earlier in order more nearly to equalize the numbers of deaths in the two periods; and (3) the study being based upon Massachusetts statistics, the periods appeared to be most suited to the Massachusetts curve, at the same time permitting the inclusion of Indiana in the later period.

The mean death rates arranged for each period in ascending order of magnitude are as follows:

*Mean diphtheria death rates per 100,000 population*

State	Rate		Percent decrease	State	Rate		Percent decrease
	1895-1911	1900-1927			1895-1911	1900-1927	
Vermont.....	17.0	9.8	42	Massachusetts.....	34.2	20.7	39
Maine.....	20.9	12.3	41	Rhode Island.....	36.4	22.2	39
Michigan.....	21.5	15.5	14	New York.....	39.4	23.0	42
New Hampshire.....	24.4	15.5	36	New Jersey.....	44.5	23.8	47
Connecticut.....	29.9	19.2	36	Indiana.....		14.7	

Excluding Indiana, which appears only in the later period, the States occupy the same relative positions in both periods, except for Michigan and New Hampshire, which reverse their relative positions. The difference between maximum and minimum average rates for the earlier period is 27.5, as compared with 14.0 for the later, the decrease being due for the greater part to a fall of 20.7 in the maximum rate. The minimum rate shows a reduction of 7.2. Excepting Michigan the percentages showing decrease in the later period are strikingly similar.

The States with smaller and less dense populations occupy the more favorable positions. One is led in this connection to speculate as to whether the less favorable position occupied by Michigan in the later period reflects to any degree the expansion of the automotive industry with a resulting increase in urbanization in that State.

The trends for the two periods in descending order of magnitude are as follows:

State	1895-1911	1900-1927	State	1895-1911	1900-1927
New Jersey.....	-0.0359	-0.0229	Rhode Island.....	-0.0252	-0.0250
Vermont.....	-.0350	-.0166	Connecticut.....	-.0237	-.0216
Massachusetts.....	-.0341	-.0231	Michigan.....	-.0214	-.0049
New York.....	-.0276	-.0262	New Hampshire.....	-.0204	-.0252
Maine.....	-.0275	-.0241	Indiana.....		-.0109

The Michigan trend in the later period is the only one that is not of statistical significance, due to the very erratic course of the curve of diphtheria mortality in that State during that interval.

While all of the trends are descending, there is a decided tendency for them to slow up in the later period. The only two exceptions to this are New Hampshire which shows a more favorable decline, and Rhode Island with approximately the same trend in both periods.

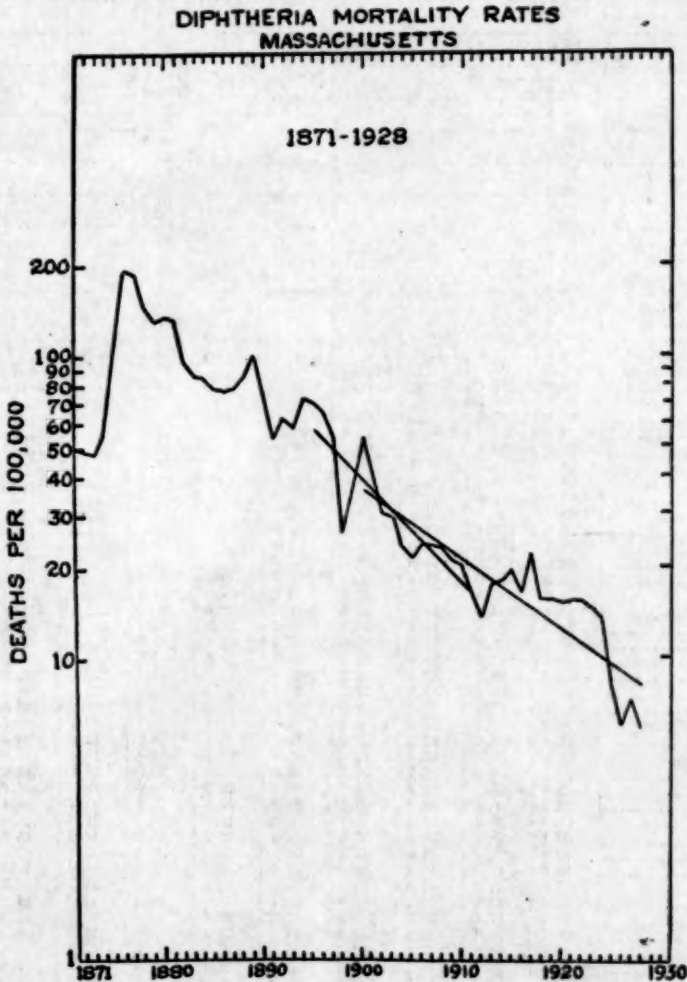
Disregarding Michigan, because of lack of significance of its trend in the later period, and Indiana, the trend for which could not be computed for the earlier period because of insufficient data, the difference between the maximum and minimum trends in the earlier period is 0.0155 while in the later period it is 0.0096, showing a tendency toward greater uniformity. The falling off in the trends is shown to a greater degree in a comparison of the maximum trends, with a difference in favor of the earlier one of 0.0097. The minimum trend for the earlier period is but 0.0038 greater than that for the later one.

The relative positions of the several States with respect to degree of downward trend in the two periods are extremely variable. New



Hampshire, the only State with a greater trend in the later period, moves from 9th to 2nd position, while Vermont, which shows the most unfavorable change in trend, drops from 2nd to 8th place.

The continued decrease in the diphtheria death rates at a comparatively low level, coupled with the tendency of the trends to slow



up, suggests that the rates are approaching the point where the downward acceleration would naturally become retarded and the curves would tend to flatten out with progressively smaller reductions in rates.

TABLE 1.—Diphtheria mortality rates per hundred thousand population for the ten States admitted to the United States death registration area up to and including 1900, from 1858 to 1931, as available

Year	Massachusetts <sup>1</sup>	New Jersey <sup>1</sup>	Connecticut <sup>1</sup>	New Hampshire <sup>2</sup>	New York <sup>1</sup>	Rhode Island <sup>1</sup>	Vermont <sup>1</sup>	Indiana <sup>1</sup>	Maine <sup>1</sup>	Michigan <sup>1</sup>
1858	43.2						21.6			
1859	46.2						39.4			
1860	68.0						12.0			
1861	89.0						155.8			
1862	91.9						282.7			
1863	181.7						416.6			
1864	158.0						291.6			
1865	92.4						130.1			
1866	63.3						72.9			
1867	45.0						34.5			
1868	56.4						31.1			
1869	54.0						31.1			
1870	46.3						32.0			
1871	49.8						19.9			
1872	48.9						28.4			
1873	47.2						34.1			
1874	56.5						45.9			26.0
1875	113.5						49.0			26.5
1876	195.8						73.2			33.6
1877	186.1						134.0			43.7
1878	145.2						137.6			72.7
1879	130.3	108.8					125.5			110.0
1880	134.1	77.1					84.1			114.0
1881	131.0	97.2					92.9			145.3
1882	95.6	123.7					80.3			102.0
1883	86.0	94.7					59.2			75.7
1884	85.8	82.1		44.2			41.2			76.5
1885	78.0	117.0	73.0	41.9	81.2		58.0			74.5
1886	77.5	90.4	78.7	60.2	99.2		48.7			79.5
1887	78.7	113.7	67.1	70.9	113.2		80.6			68.3
1888	86.1	148.0	73.2	53.0	110.7		82.7			59.2
1889	101.3	111.8	97.7	79.6	98.9		92.3			61.0
1890	72.5	109.2	74.6	60.2	81.7		73.4			83.2
1891	53.0	117.4	75.8	56.9	82.6		59.8			63.4
1892	61.9	117.4	68.0	46.8	94.4		55.3		32.0	60.7
1893	58.0	108.9	58.6	25.7	93.0		45.1		23.0	55.5
1894	73.3	81.9	45.1	30.1	101.1	35.3	34.9		21.0	36.9
1895	71.1	87.5	47.5	32.5	75.1	88.5	24.0		29.8	34.5
1896	65.3	102.2	58.4	36.5	67.9	72.0	37.9		26.3	39.8
1897	54.2	78.3	47.1	35.9	59.6	57.5	48.1		41.8	32.0
1898	26.3	52.4	31.7	26.9	37.2	22.6	17.7		36.3	19.3
1899	38.1	41.9	26.0	25.2	38.9	20.5	14.1		21.9	18.2
1900	52.5	48.7	33.6	24.2	45.4	44.3	14.5	27.5	22.3	21.9
1901	40.9	35.5	32.1	21.7	40.5	40.4	14.2	20.5	18.3	20.4
1902	30.2	37.4	27.2	39.0	37.4	33.0	7.5	15.7	16.6	20.2
1903	29.6	37.1	25.7	24.4	38.8	41.2	12.8	17.1	16.6	27.0
1904	23.5	44.6	22.2	16.2	37.3	29.6	16.8	11.6	23.3	20.0
1905	21.6	32.6	23.1	18.2	28.0	25.2	16.8	13.5	15.4	18.3
1906	24.1	30.6	27.1	20.3	32.1	24.4	19.5	14.8	16.6	17.8
1907	23.8	28.1	23.3	22.3	30.3	22.8	9.3	14.0	16.9	15.6
1908	23.1	23.3	18.7	23.1	28.2	29.4	12.2	11.4	14.4	12.6
1909	21.0	25.9	19.4	16.7	25.8	18.9	8.1	12.6	15.3	14.3
1910	20.1	28.7	24.5	16.4	26.6	23.2	8.9	14.0	13.3	17.6
1911	16.4	21.7	21.6	15.4	21.1	24.8	6.4	13.8	10.3	16.3
1912	13.5	17.9	16.7	19.5	17.2	23.6	8.9	18.9	12.9	15.6
1913	17.6	21.0	18.8	13.7	19.3	23.8	5.6	18.7	11.7	22.0
1914	17.9	21.4	19.2	9.8	20.7	17.6	11.2	13.7	11.8	16.1
1915	19.5	17.4	15.7	7.4	17.8	16.4	10.9	10.6	11.3	10.9
1916	16.7	15.1	14.5	11.0	15.2	23.3	6.4	13.5	7.3	15.3
1917	21.8	14.8	17.3	10.7	10.7	17.3	7.3	15.3	9.4	25.0
1918	15.6	16.2	14.3	8.3	17.3	16.1	7.0	14.7	7.4	19.6
1919	15.5	18.1	17.3	8.5	19.9	19.5	4.2	10.9	6.1	21.3
1920	15.3	17.7	16.9	12.1	18.2	19.9	5.9	12.2	7.9	24.2
1921	15.6	18.3	12.4	16.6	16.1	12.1	8.2	23.9	14.1	25.0
1922	16.4	18.2	12.8	11.0	13.5	10.9	10.7	18.2	7.8	15.8
1923	14.6	14.0	12.7	9.1	9.3	11.3	10.7	14.3	6.4	17.5
1924	13.3	9.8	11.2	7.5	9.8	9.2	7.0	8.1	7.5	12.1
1925	8.0	9.3	8.2	6.6	8.9	6.6	7.3	5.6	4.5	9.1
1926	5.9	8.9	5.3	4.0	6.4	6.3	4.2	5.9	2.8	17.1
1927	6.3	11.4	5.8	4.0	8.6	8.8	2.5	7.5	3.8	11.7
1928	5.8	12.2	5.2	5.5	7.4	7.3	3.1	5.7	3.2	8.4
1929	6.0	11.7	3.8	5.0	5.3	6.6	2.8	4.8	1.7	10.6
1930	4.3	8.1	2.0	4.1	2.7	5.4	1.9	4.1	3.3	6.2
1931	3.0	2.9	.9	3.2	2.2	4.7	1.1	4.1	2.5	3.5

<sup>1</sup> Admitted to United States death registration area in 1880.

<sup>2</sup> Admitted to United States death registration area in 1890.

<sup>3</sup> Admitted to United States death registration area in 1900.

## CORRELATION OF ANNUAL DEVIATIONS FROM TREND

The correlation of annual plus and minus deviations from the trend lines has been computed by the short formula,  $r = \sin \frac{\pi (m-n)}{2m+n}$ . The number of observations was 28 (1900-1927) for each of the States except Maine, for which there were 27.

In the correlation table (Table 2) we note that, irrespective of significance of correlation, only 8 of the 45 correlations are negative; whereas, with nothing but chance operating, we would expect them to be about evenly divided—that is, with approximately 22 negative correlations. If we consider only the significant<sup>1</sup> correlations, we find but 2 of 19 to be negative. This indicates some significant factor correlating the annual deviations in a positive manner.

The highest positive correlation is between Massachusetts and Indiana (0.84). The States with the largest number of significant positive correlations are Connecticut and Michigan, each with 6, as follows:

Connecticut		Michigan	
Massachusetts.....	0.78	Indiana.....	0.63
Indiana.....	.65	Connecticut.....	.53
Michigan.....	.53	Massachusetts.....	.53
New York.....	.53	Rhode Island.....	.53
New Hampshire.....	.44	New Jersey.....	.44
Rhode Island.....	.44	New York.....	.44

The only two significant negative correlations are Maine and Rhode Island (-0.50) and Vermont and Rhode Island (-0.44).

TABLE 2.—Correlation of annual deviations from trend lines of logs of diphtheria mortality rates

	New Hamp- shire	Michi- gan	New Jersey	Maine	Rhode Island	New York	Connec- ticut	Indiana	Verm- ont
Massachusetts.....	-0.22	+0.53	+0.32	+0.17	+0.44	+0.32	+0.78	+0.84	+0.44
New Hampshire.....		+ .10	- .10	+ .60	+ .22	+ .32	+ .44	+ .10	- .22
Michigan.....			+ .44	- .17	+ .53	+ .44	+ .53	+ .63	- .10
New Jersey.....				+ .17	- .10	+ .63	+ .32	+ .22	+ .32
Maine.....					- .50	+ .29	+ .39	+ .29	+ .17
Rhode Island.....						+ .10	+ .44	+ .65	- .44
New York.....							+ .63	+ .22	+ .10
Connecticut.....								+ .65	+ .22
Indiana.....									+ .10

Considering the nature of the disease in question and the wide extent of the territory embraced by the 10 States, the general group correlation suggests the influence of the larger, long range annual variations in meteorological conditions. In this connection it is inter-

<sup>1</sup> 0.45 and over indicates but 2 chances in 100 of such a chance correlation.

esting to note that the 10 States are all in about the same latitude, and this is even truer of their more densely populated portions. We know, moreover, that the excessively cold waves of winter originate in the West and Northwest and move eastward to affect a wide area of the country. The States here considered would all probably be affected to a similar degree by annual variations in the number and intensity of these more extensive and intense cold waves.

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### MORTALITY IN CERTAIN STATES DURING 1932, WITH COMPARATIVE DATA FOR RECENT YEARS<sup>1</sup>

For several years the United States Public Health Service has secured from State health departments current mortality data and has published death rates from important causes from as many States as could furnish the information. The rates are computed from preliminary reports and because of (a) some lack of uniformity in the method of classifying deaths according to cause, (b) some delayed death certificates, and (c) various other reasons, these preliminary rates cannot be expected to agree in all instances with final rates published by the Bureau of the Census. The final figures are based on a complete review and retabulation of the individual death certificates from each State. The preliminary rates given in the accompanying tables are intended to serve as a current index of mortality until final figures are available.

For purposes of comparison, the mortality rates for a few preceding years are given. These comparative rates are from the same source as are the current reports. Although final figures are often available for earlier years, the provisional figures are retained as being more comparable with current preliminary rates.

In table 1 the death rates from important causes for groups of States have been brought together. Nearly all of the rates are based on data from 28 States with a population of nearly 94 million. The detailed tables show rates for each State. The summary table includes for each cause every State that is included for all five years in the detailed tables. While the rates in this group of States may not be the same as those for the total registration area, it is highly probable that the trend in these rates will be comparable with the trend in the rates in the total registration area.

In considering the trend of the rates in the 5-year period shown in the tables it should be remembered that the mortality of both 1928 and 1929 was increased somewhat by the influenza epidemic of the

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<sup>1</sup> From the Office of Statistical Investigations, U.S. Public Health Service.



winter of 1928-29. However, 1930 was free from any wide-spread epidemic and such epidemics as occurred in 1931 and 1932 were distinctly minor.

The death rate from all causes in the 27 States was 10.8 in 1932, as compared with 11.0 and 11.2 in 1931 and 1930, respectively. Of the 27 States, 20 showed a decline in 1932 from 1931 and 3 an increase in mortality, with 4 States remaining the same in both years.

In 26 States the infant mortality in 1932 was 58 per 1,000 live births as compared with 61 and 62 for 1931 and 1930, respectively. Considering the individual States, 22 of the 26 States with data available for both years showed a decrease in 1932 as compared with 1931, with increases in the other 4 States.

In spite of the fact that 1932 represents the third year of the depression, the death rate from tuberculosis in the group of 28 States was only 60 per 1,000 as compared to 65 and 68 in 1931 and 1930, respectively. The amount of the decline was apparently about the same as has taken place in the past several years. Of the 28 States, 26 showed a decline and only 2 an increase; however, in 4 States the decline was very small.

Typhoid fever continued a rather steady decline, being 3.2 per 100,000 for 1932 as compared with 3.8 and 4.0 for 1931 and 1930, respectively. Twenty-two of the 28 States showed a decrease in 1932 as compared with 1931, 1 remained the same, and 5 had a higher rate in 1932 than in 1931. Diarrhea and enteritis likewise continued a steady decline. The deaths of children under 2 years of age amounted to 10.3 per 100,000 total population as compared with 14.0 and 17.9 in 1931 and 1930, respectively. Of the 27 States with available data, 26 showed decreases and only 1 increased in 1932 as compared with 1931.

Influenza, of apparently a mild form, was rather prevalent in the early spring months of 1932 and again in December, with the major portion of the mild epidemic coming in the last week of 1932 and the first week of 1933. A minor epidemic also occurred in 1931, but 1930 was free from any excess deaths from this cause. The deaths credited to influenza in 1932 amounted to 28 per 100,000 as compared with 26 and 19 in 1931 and 1930, respectively. All of these figures are distinctly less than those for 1928 and 1929, when a more severe epidemic occurred. Mortality from pneumonia was slightly less in 1932 than in preceding years, being 77 in 1932 as compared with 82 and 83 in 1931 and 1930, respectively. Considering both influenza and pneumonia the mortality of 105 per 100,000 in 1932 is slightly less than in 1931 (107) and slightly greater than in 1930 (102). The

mortality of 1928 and 1929 was definitely greater for both causes. Of the 28 States, 20 had higher influenza rates in 1932 than in 1931. Only eight had higher pneumonia rates in 1932 than in 1931, and in one other State the rate was the same.

Because of wave-like fluctuations that occur in the incidence of the communicable diseases of children, the comparison of one year with another means little as to the real trend of the mortality from these diseases. Diphtheria, which has been declining for many years, reached a new low level of 3.8 in these 28 States as compared with 4.0 and 4.6 in 1931 and 1930, respectively. The mortality from this much-dreaded disease was in 1932 less than the mortality from whooping cough.

The death rate from poliomyelitis was less in 1932 than in either of the two preceding years, being the same as in 1929. In 1930 the disease was epidemic in certain States, and 1931 marked a considerable epidemic in the Eastern States and particularly in New York City. Twenty-two of the 28 States had lower rates in 1932 than in 1931. Meningitis mortality was likewise small in 1932. Twenty-four of the 28 States showed decreases in 1932 as compared with 1931.

The death rate from diabetes was greater in 1932 than in any of the 5 years included in the table. In 21 of the 28 States there was an increase in 1932 as compared with 1931, while in 6 States there was a decrease, with the other State remaining the same in the two years.

Cancer continued its steady increase, the rate of 101 per 100,000 in 1932 being greater than in any other year included. Twenty of the 28 States increased in 1932 as compared with 1931 and 8 decreased.

Diseases of the heart continued to increase, 20 of the 26 States with available data having higher rates in 1932 than in 1931. The death rate from nephritis was about the same in 1932 as in 1931, but was less than in 1930 in the group of 27 States with available data. Of these States, 14 had a higher rate and 13 had a lower rate in 1932 than in 1931. In 25 States with available data on cerebral hemorrhage, the rate in 1932 was very slightly above that for the last two preceding years. In 13 of these States there was an increase in 1932 over 1931, in 11 a decrease, and in 1 the rate was the same for both years.

TABLE 1.—Summary of mortality from certain causes in a group of States, 1928-32 <sup>1</sup>

Diseases (numbers in parentheses are from the International List of Causes of Death, fourth revision, 1929)	1932	1931	1930	1929	1928
Death rate per 1,000 population					
27 States (population July 1, 1932, 92,110,000): All causes.....	10.8	11.0	11.2	11.8	13.0
Deaths under 1 year per 1,000 live births					
26 States (live births, 1,520,808): Total infant mortality.....	58	61	62	66	74
20 States (live births, 1,235,370): All infant mortality except malformations and early infancy.....	26	28	28	32	35
Deaths of mothers per 1,000 live births					
26 States (live births, 1,520,808): Maternal mortality.....	5.9	6.2	6.2	6.4	7.1
Death rate per 100,000 population					
28 States (population July 1, 1932, 93,855,000):					
Typhoid fever (1, 2).....	3.2	3.8	4.0	3.6	4.2
Measles (7).....	1.5	2.5	2.9	2.4	4.7
Whooping cough (9).....	4.2	3.6	4.3	5.8	5.2
Scarlet fever (8).....	2.0	2.1	1.9	2.1	1.9
Diphtheria (10).....	3.8	4.1	4.6	6.4	7.2
Acute anterior poliomyelitis (16).....	.7	1.9	1.1	.7	1.1
Meningococcus meningitis (18).....	1.3	2.1	3.1	3.9	2.4
Influenza (11).....	28.0	25.7	19.1	82.8	43.2
Pneumonia, all forms (107-109).....	77.4	82.0	83.2	92.5	100.2
Tuberculosis, all forms (23-32).....	60.4	64.8	68.2	72.8	77.3
Cancer (45-53).....	100.7	97.6	96.5	96.5	95.8
Diabetes mellitus (59).....	21.7	20.3	19.1	18.8	19.4
27 States (population July 1, 1932, 92,110,000):					
Diarrhea and enteritis under 2 years (119).....	10.3	14.0	17.9	16.5	19.0
Nephritis, all forms (130-132).....	84.4	83.7	88.0	90.7	92.9
26 States (population July 1, 1932, 88,866,000):					
Diseases of the heart (90-95).....	219.5	211.7	209.6	215.1	214.6
25 States (population July 1, 1932, 87,232,000):					
Cerebral hemorrhage, apoplexy (82, a, b).....	79.3	78.5	78.9	79.6	81.9

<sup>1</sup> See tables 2 and 3 for names of States included for each disease. The District of Columbia is counted as a State.

TABLE 2.—Mortality in certain States, 1928-32

State	Deaths all causes, per 1,000 population					Maternal mortality, per 1,000 live births				
	1932	1931	1930	1929	1928	1932	1931	1930	1929	1928
Total.....	10.8	11.0	11.2	11.8	12.0	6.1	6.4	6.3	6.6	7.3
Alabama.....	10.0	10.4	11.2	12.2	12.0	7.1	7.4	8.1	8.3	8.2
California.....	10.9	11.3	11.6	11.9	12.5	5.8	6.3	5.3	5.2	5.6
Connecticut.....	10.0	10.3	10.5	11.3	11.3	5.7	6.8	8.5	5.9	5.8
District of Columbia.....	16.1	15.9	15.2	15.4	15.1	7.9	6.1	9.1	6.1	8.5
Georgia.....	10.9	11.1	11.8	11.8	12.4	9.5	10.0	10.6	10.4	10.7
Idaho.....	9.2	9.6	9.7	9.2	9.4	4.4	2.6	4.4	6.1	6.8
Illinois.....	10.5	11.1	10.9	11.6	12.1	5.1	8.6	9.1	6.8	5.7
Indiana.....	11.2	11.3	11.6	12.2	12.2	5.2	5.9	5.8	7.0	6.1
Iowa.....	10.2	10.3	10.6	10.4	10.4	4.4	4.1	7.0	5.4	5.3
Kansas.....	10.1	10.0	10.4	10.4	11.2	5.4	5.8	7.0	6.1	7.4
Louisiana.....	10.6	10.9	11.8	11.8	12.2	8.2	8.9	9.8	10.3	11.1
Maryland.....	12.6	13.2	13.2	13.5	13.6	4.6	6.0	5.3	5.6	6.5
Michigan.....	9.7	9.8	10.6	11.8	11.8	5.7	5.9	5.9	6.1	8.6
Minnesota.....	9.6	9.6	9.7	9.9	10.1	4.1	4.6	4.8	3.9	4.8
Mississippi.....	9.2	9.9	10.8	11.6	13.1					
Montana.....	9.7	9.7	9.8	10.7	10.7	5.7	7.0	6.8	8.4	7.5
Nebraska.....	9.2	9.1	9.4	9.6	10.0	5.0	5.1	5.3	5.4	6.0
New Jersey.....	10.1	10.6	10.7	11.5	11.5	5.7	5.9	5.7	5.3	5.9
New York.....	11.3	11.6	11.7	12.4	13.1	6.1	5.9	8.6	5.4	5.8
North Carolina.....	9.4	10.2	11.4	11.9	11.7	6.8	7.8	7.6	7.5	7.8
Ohio.....	11.1	11.1	11.4	12.5	12.4	5.9	6.0	5.5	6.6	6.2
Pennsylvania.....	10.9	11.3	11.3	12.1	12.5	5.4	5.7	5.3	5.9	5.9
South Dakota.....	8.2	8.6	8.5	8.6	9.0	3.7	4.9	5.6	5.5	4.3
Tennessee.....	10.5	10.7	11.4	11.7	12.1	6.6	6.8	7.9	7.8	8.9
Virginia.....	10.9	11.6	11.7	12.0	12.6	6.6	7.4	6.6	6.5	7.5
West Virginia.....	10.0	10.0	10.4	10.6	10.4	5.1	5.2	5.7	5.3	5.7
Wisconsin.....	10.0	10.1	10.3	10.7	10.5	4.3	4.3	4.8	5.3	5.9
Hawaii.....	9.7	9.8	10.4	12.2	11.8					

State	Infant mortality rate per 1,000 live births									
	Total infant mortality					All except malformations and early infancy				
	1932	1931	1930	1929	1928	1932	1931	1930	1929	1928
Total.....	58	61	62	66	74	26	28	28	32	35
Alabama.....	61	65	73	74	75	36	40	45	44	48
California.....	53	57	59	63	62	23	26	29	32	33
Connecticut.....	51	56	60	68	63					
District of Columbia.....	73	71	70	69	65	33	35	36	34	25
Georgia.....	65	69	78	76	82					
Idaho.....	58	59	51	55	59	32	27	24	25	27
Illinois.....	52	56	56	61	64	21	25	23	26	29
Indiana.....	56	59	58	66	64	26	28	26	31	39
Iowa.....	48	51	56	52	54	20	22	22	21	20
Kansas.....	47	48	52	57	59	17	19	22	26	29
Louisiana.....	66	68	80	76	79	36	40	49	49	49
Maryland.....	70	79	73	80	80	35	45	38	42	38
Michigan.....	54	56	63	67	69	22	22	27	31	26
Minnesota.....	43	47	47	48	54	15	17	17	18	21
Montana.....	49	56	59	64	61					
Nebraska.....	43	47	49	52	53	15	19	19	23	21
New Jersey.....	52	57	57	61	65					
New York.....	53	57	58	61	65	22	33	26	27	31
North Carolina.....	67	73	77	79	86					
Ohio.....	60	59	58	66	66	26	26	25	23	29
Pennsylvania.....	59	65	66	71	71	31	34	30	38	37
South Dakota.....	51	58	56	56	59	23	28	26	27	28
Tennessee.....	69	70	71	79	81	42	44	44	53	52
Virginia.....	66	72	71	74	76					
West Virginia.....	78	77	81	78	70	40	38	44	41	34
Wisconsin.....	51	53	56	61	61	19	20	23	27	25
Hawaii.....	76	75	82	101						



TABLE 3.—Death rates for various causes per 100,000 population

State	Typhoid fever (1, 2)					Diarrhea and enteritis under 2 years (119)				
	1932	1931	1930	1929	1928	1932	1931	1930	1929	1928
Total.....	3.2	3.8	4.0	3.6	4.2	10.3	14.0	17.9	16.5	19.0
Alabama.....	4.9	6.9	7.9	7.5	9.4	15.4	20.6	31.2	25.3	32.6
California.....	1.3	1.6	1.7	1.7	2.0	8.2	11.5	14.8	15.3	15.6
Connecticut.....	.6	1.0	.9	.9	.8	4.1	7.9	10.7	14.0	6.9
District of Columbia.....	1.4	3.9	3.3	2.7	3.1	16.0	16.7	19.9	18.4	14.6
Georgia.....	12.6	16.7	16.4	11.6	15.6	13.2	18.8	24.8	17.9	25.4
Idaho.....	3.3	3.6	4.7	3.2	3.6	2.0	4.7	4.7	8.3	14.5
Illinois.....	1.7	1.5	1.9	1.4	2.2	6.9	3.9	5.9	12.2	17.2
Indiana.....	2.5	2.8	3.7	3.5	4.4	11.4	13.1	18.4	16.9	17.1
Iowa.....	1.7	1.4	1.6	2.3	2.3	3.1	5.9	6.6	3.9	6.1
Kansas.....	1.7	2.3	3.0	2.9	2.4	7.2	8.1	12.1	10.4	16.9
Louisiana.....	10.8	14.5	11.7	10.6	12.3	14.0	22.4	22.1	26.3	24.9
Maryland.....	3.0	5.4	6.4	4.3	5.4	20.3	31.3	30.0	32.5	27.3
Michigan.....	1.1	1.4	1.8	1.7	1.7	6.3	9.2	14.4	16.0	16.9
Minnesota.....	.7	.6	1.0	.9	.5	3.9	4.4	6.8	4.1	7.8
Mississippi.....	6.3	9.5	10.2	8.8	12.5	10.9	14.4	15.0	19.2	17.6
Montana.....	2.8	2.2	3.2	5.5	3.0	5.0	10.0	15.3	10.6	9.6
Nebraska.....	1.4	1.7	1.6	1.8	1.8	4.9	7.1	8.3	6.6	9.9
New Jersey.....	.7	1.0	1.1	1.4	1.7	5.6	9.1	11.5	12.2	14.7
New York.....	1.0	1.1	1.2	1.3	1.8	6.4	8.7	11.4	11.9	14.5
North Carolina.....	5.0	5.1	4.4	5.5	6.0	16.8	22.3	20.7	30.1	39.1
Ohio.....	2.0	2.4	3.3	2.2	2.1	9.2	11.7	16.4	12.5	14.6
Pennsylvania.....	1.8	2.1	2.6	2.1	2.0	12.3	17.5	22.5	19.7	22.2
South Carolina.....	14.7	16.6	16.9	14.4	19.5					
South Dakota.....	1.4	2.7	2.9	3.2	2.9	6.4	11.4	11.0	5.5	9.2
Tennessee.....	11.0	10.7	12.2	11.9	13.5	20.4	23.4	28.6	23.9	32.0
Virginia.....	5.1	7.3	5.8	4.4	6.1	14.8	22.5	26.1	19.7	27.7
West Virginia.....	12.1	12.6	12.1	11.5	10.4	48.9	54.3	70.1	57.8	50.6
Wisconsin.....	.7	.7	.9	1.4	.8	6.8	10.4	10.2	11.7	11.1
Hawaii.....	2.4	2.6	2.4	3.9	6.3	45.7	49.3	76.6	103.1	82.8
Industrial policy holders, Metropolitan Life Insurance Co., ages 1 and over <sup>1</sup> .....	1.7	2.4	2.4	2.4	2.7	4.6	5.9	8.0	7.9	8.7

State	Measles (7)					Whooping cough (9)				
	1932	1931	1930	1929	1928	1932	1931	1930	1929	1928
Total.....	1.5	2.5	2.9	2.4	4.7	4.2	3.6	4.3	5.8	5.2
Alabama.....	.2	6.4	3.1	2.4	8.7	7.4	3.6	9.5	9.2	7.7
California.....	.9	1.9	5.2	.3	.5	2.9	2.4	3.5	5.0	6.4
Connecticut.....	1.0	2.1	.3	3.0	3.8	2.7	2.5	2.0	2.6	6.4
District of Columbia.....	.2	2.4	.2	(7)	3.6	4.0	5.7	2.7	5.0	4.6
Georgia.....	.5	2.1	4.4	1.0	5.2	3.8	3.8	9.0	9.4	5.6
Idaho.....	.2	1.8	2.0	2.7	.5	.7	6.3	4.3	3.6	3.4
Illinois.....	.6	4.2	1.0	3.6	1.1	2.9	2.7	2.1	3.4	3.7
Indiana.....	.4	4.5	1.9	3.7	2.0	5.0	4.3	3.0	5.4	4.3
Iowa.....	.2	.1	8.1	1.4	.5	2.0	2.4	3.7	4.1	3.2
Kansas.....	1.3	.4	4.2	2.4	1.0	2.5	1.3	3.5	3.9	5.0
Louisiana.....	1.7	.6	4.7	2.5	8.6	4.0	5.4	5.9	5.4	8.8
Maryland.....	1.1	5.9	.4	1.4	6.6	5.4	7.6	4.4	7.9	7.4
Michigan.....	3.6	.6	4.7	3.1	6.9	3.9	3.7	3.6	5.4	5.0
Minnesota.....	.5	.3	3.3	3.2	.5	1.7	2.1	2.6	4.5	3.1
Mississippi.....	.1	.4	1.4	4.3	14.6	4.9	3.4	6.9	9.4	9.2
Montana.....	2.2	.4	2.2	9.3	1.5	4.1	8.9	3.0	3.3	9.1
Nebraska.....	.1	.3	6.2	2.4	.7	1.9	4.0	2.6	3.6	3.2
New Jersey.....	1.0	2.4	3.2	.9	6.4	2.9	3.3	2.2	4.7	4.7
New York.....	1.6	1.8	1.9	1.5	4.7	2.3	2.9	2.8	3.0	4.9
North Carolina.....	1.8	3.2	1.1	.6	16.6	6.9	6.7	8.5	8.3	6.2
Ohio.....	2.4	2.1	2.8	3.5	2.9	4.9	2.4	3.0	8.0	3.8
Pennsylvania.....	2.1	4.2	2.3	3.8	5.2	4.4	3.1	3.9	6.0	5.7
South Carolina.....	2.4	2.2	.5	.1	16.1	7.6	6.3	10.8	12.7	10.0
South Dakota.....	(7)	.3	3.0	2.2	1.6	6.3	6.7	2.7	3.8	5.0
Tennessee.....	.3	3.8	4.9	1.0	7.8	7.5	6.3	6.8	7.4	5.2
Virginia.....	.9	3.2	3.9	1.6	6.4	12.5	6.2	10.8	10.9	7.7
West Virginia.....	9.8	2.3	4.9	4.5	3.1	10.2	7.4	12.0	12.8	3.5
Wisconsin.....	1.4	1.4	3.3	2.7	.5	2.2	1.9	3.3	3.8	2.3
Hawaii.....	6.6	10.2	4.3	5.0	2.3	1.1	.3	3.5	27.9	4.3
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	1.4	2.6	2.3	2.4	4.2	1.4	1.7	1.9	3.0	2.7

<sup>1</sup> The Metropolitan Life Ins. Co. data for diarrhea and enteritis include adults as well as children under 2 years.

<sup>2</sup> No deaths.

TABLE 3.—Death rates for various causes per 100,000 population—Continued

State	Scarlet fever (8)					Diphtheria (10)				
	1932	1931	1930	1929	1928	1932	1931	1930	1929	1928
Total.....	2.0	2.1	1.9	2.1	1.9	3.8	4.1	4.6	6.4	7.2
Alabama.....	1.3	1.1	1.4	1.4	.4	7.5	7.6	7.1	9.6	9.2
California.....	.9	.9	1.2	1.7	1.0	3.3	2.9	3.4	3.4	6.0
Connecticut.....	1.2	.7	1.6	.9	1.3	1.0	.8	2.0	3.9	5.6
District of Columbia.....	2.6	1.0	2.3	2.3	1.5	3.2	7.1	3.7	7.0	9.4
Georgia.....	.6	1.5	1.3	1.3	1.1	5.7	5.0	4.5	6.0	8.1
Idaho.....	1.9	2.2	2.0	.9	2.7	3.1	2.5	3.1	2.3	3.6
Illinois.....	3.3	4.5	3.9	3.9	2.1	3.0	4.7	7.1	9.9	8.7
Indiana.....	2.6	3.4	2.1	3.2	2.1	5.0	4.1	4.1	4.7	5.7
Iowa.....	1.5	1.6	2.5	2.2	2.2	2.3	1.7	1.8	1.3	2.7
Kansas.....	1.7	1.2	2.4	3.3	2.7	3.9	3.7	3.6	3.6	3.3
Louisiana.....	.4	.7	.6	.6	.5	6.5	6.4	5.0	6.6	7.0
Maryland.....	1.9	1.9	2.1	2.3	.7	3.1	4.0	3.4	4.5	6.6
Michigan.....	2.2	2.3	2.7	3.0	4.0	2.1	3.5	6.2	10.5	8.3
Minnesota.....	1.6	.9	1.4	2.6	2.4	.9	1.4	1.2	2.6	2.8
Mississippi.....	.6	.5	.6	.3	.8	6.2	9.9	6.8	7.1	8.6
Montana.....	1.5	1.9	2.8	3.0	1.9	.9	1.7	.7	1.9	3.7
Nebraska.....	2.0	1.5	2.2	3.8	3.0	4.0	3.5	3.3	3.5	4.0
New Jersey.....	1.7	2.0	1.5	1.1	1.6	2.3	2.9	8.2	11.2	11.8
New York.....	2.8	1.7	1.1	1.4	1.6	2.1	2.2	2.7	5.3	7.4
North Carolina.....	1.1	2.0	1.2	1.7	1.2	4.5	7.3	7.9	11.0	10.0
Ohio.....	3.3	3.3	2.6	2.2	2.0	3.3	2.8	2.8	3.4	5.7
Pennsylvania.....	2.6	2.3	1.9	2.5	2.6	4.0	3.6	5.2	7.2	8.9
South Carolina.....	.5	1.0	.7	.9	.5	4.9	4.9	7.3	8.6	10.1
South Dakota.....	1.3	.6	.6	2.6	2.8	2.9	2.6	2.9	1.6	2.2
Tennessee.....	.8	2.4	1.6	2.4	1.6	8.2	9.3	6.6	8.4	8.2
Virginia.....	1.3	1.4	1.1	1.5	1.1	5.3	8.5	6.1	7.8	7.7
West Virginia.....	2.4	1.7	1.9	1.5	2.6	13.2	9.3	6.2	7.4	7.8
Wisconsin.....	1.5	2.1	3.0	2.5	2.5	1.9	1.8	2.4	2.8	3.4
Hawaii.....	.3	( <sup>1</sup> )	.3	( <sup>1</sup> )	1.1	4.8	5.7	11.3	8.9	16.9
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	2.8	3.2	2.5	2.7	2.6	3.8	4.3	5.7	8.6	9.5

State	Poliomyelitis (16)					Meningococcus meningitis (18)				
	1932	1931	1930	1929	1928	1932	1931	1930	1929	1928
Total.....	0.7	1.9	1.1	0.7	1.1	1.3	1.2	3.1	3.9	2.4
Alabama.....	.2	.9	.8	1.0	.8	.6	3.6	1.5	1.0	.7
California.....	.5	.8	2.8	.9	1.5	1.4	2.5	2.8	6.9	2.2
Connecticut.....	.4	5.9	1.2	.5	.8	.7	.7	.9	1.4	1.1
District of Columbia.....	1.2	.8	.6	.8	1.0	2.6	5.7	2.0	2.9	1.0
Georgia.....	.9	1.2	1.1	.7	.7	.8	1.8	3.0	2.3	.7
Idaho.....	.2	.7	1.3	1.4	2.5	3.1	6.9	6.9	22.3	10.4
Illinois.....	.5	1.3	.7	.3	.5	2.0	3.2	2.4	3.3	3.0
Indiana.....	.2	.6	.7	.3	.2	8.9	5.5	8.3	2.7	.2
Iowa.....	1.0	1.1	1.7	.9	.7	.9	2.6	3.3	1.6	.9
Kansas.....	.6	.6	3.6	.5	.5	1.3	1.3	2.8	2.8	1.1
Louisiana.....	.5	.9	2.3	.6	1.0	1.2	2.3	3.6	2.7	.8
Maryland.....	.4	.7	.4	.2	1.6	1.1	1.8	1.3	1.8	.6
Michigan.....	.5	2.2	.8	1.0	.7	1.3	2.4	7.5	17.9	4.1
Minnesota.....	.5	2.4	1.6	.4	2.3	.9	1.6	1.9	1.8	1.8
Mississippi.....	.8	.4	.5	.6	1.1	1.0	1.5	6.9	.8	1.0
Montana.....	3.1	2.8	1.1	( <sup>1</sup> )	1.9	1.3	2.2	4.1	10.0	12.0
Nebraska.....	.9	.9	3.4	.7	.6	.5	1.6	2.5	2.6	1.8
New Jersey.....	1.1	3.5	.4	.4	.3	.8	1.8	1.8	2.7	3.8
New York.....	.4	5.2	1.0	.9	2.0	1.5	2.7	2.6	4.8	8.8
North Carolina.....	.5	.6	.4	.6	.6	.5	.6	.8	.5	.7
Ohio.....	.4	.8	1.6	.6	1.1	.8	1.5	1.8	2.7	2.0
Pennsylvania.....	1.5	1.0	.5	.5	.8	1.3	1.9	2.2	2.8	1.6
South Carolina.....	.6	.9	.9	.6	1.0	1.4	2.1	4.1	3.0	1.6
South Dakota.....	1.1	2.3	1.6	1.2	1.3	.4	.3	.3	1.3	1.5
Tennessee.....	.6	.9	1.0	1.2	1.6	1.4	4.3	9.6	2.2	.9
Virginia.....	.7	.6	.8	1.3	1.3	1.1	1.8	2.3	1.5	1.3
West Virginia.....	.7	1.4	.6	.9	2.4	1.1	1.0	1.1	.8	2.0
Wisconsin.....	.4	1.6	.9	.4	.5	.9	1.3	2.0	3.7	3.3
Hawaii.....	.8	.8	( <sup>1</sup> )	1.1	.3	2.9	2.3	4.3	22.1	4.0
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	1.0	2.6	1.1	.6	1.2					

<sup>1</sup> No deaths.

TABLE 3—Death rates for various causes per 100,000 population—Continued

State	Influenza (11)					Pneumonia, all forms (107-109)				
	1932	1931	1930	1929	1928	1932	1931	1930	1929	1928
Total.....	28.0	25.7	19.1	52.8	43.2	77.4	82.0	83.2	92.5	100.2
Alabama.....	48.4	40.7	35.5	119.8	71.0	66.0	83.4	85.8	87.5	90.2
California.....	18.3	13.6	9.1	20.0	40.2	64.1	66.5	73.0	78.8	84.6
Connecticut.....	15.0	17.1	13.4	38.8	22.6	64.4	70.6	87.3	105.4	106.3
District of Columbia.....	15.5	18.1	8.2	20.5	17.6	135.5	140.3	122.1	143.3	133.3
Georgia.....	39.0	44.1	32.2	86.3	43.6	82.9	82.9	84.1	77.0	93.6
Idaho.....	21.0	9.2	11.2	36.7	66.6	76.7	76.5	104.0	61.9	68.4
Illinois.....	24.0	20.3	11.7	34.5	34.7	67.4	69.1	63.5	81.9	103.1
Indiana.....	42.1	33.3	19.7	59.2	59.6	84.1	82.3	83.5	98.8	103.9
Iowa.....	35.8	25.7	26.9	51.5	55.3	78.9	66.8	79.6	63.8	70.2
Kansas.....	41.6	30.0	29.3	51.3	81.2	53.5	51.5	54.2	58.0	62.5
Louisiana.....	52.4	42.1	39.9	79.1	62.0	75.5	81.4	91.5	85.9	96.0
Maryland.....	20.1	20.6	10.8	42.5	19.1	103.0	126.3	118.2	137.6	127.9
Michigan.....	22.2	16.5	11.9	37.3	35.4	63.3	57.6	68.2	88.8	93.5
Minnesota.....	30.8	21.8	15.9	39.6	42.6	68.8	69.1	71.1	70.5	74.2
Mississippi.....	40.5	37.5	29.3	105.6	83.9	48.3	56.3	60.9	62.7	90.1
Montana.....	41.6	32.7	22.9	42.4	67.8	63.6	70.3	80.2	81.9	84.9
Nebraska.....	36.9	21.8	17.7	45.9	63.8	62.0	54.3	64.0	60.1	71.4
New Jersey.....	14.0	13.6	8.9	25.2	15.7	61.3	78.0	77.7	103.5	81.1
New York.....	12.8	13.4	8.4	27.0	16.7	94.4	105.6	101.9	134.1	133.6
North Carolina.....	20.5	33.4	24.4	78.2	45.2	80.7	87.1	92.9	90.3	93.5
Ohio.....	34.1	28.8	19.4	59.6	51.7	76.8	77.9	74.6	91.2	98.9
Pennsylvania.....	29.3	28.1	19.8	56.1	43.4	81.5	97.2	92.4	106.4	122.0
South Carolina.....	50.8	65.9	49.7	80.4	76.6	99.0	104.8	102.4	97.0	113.2
South Dakota.....	28.9	26.0	24.4	51.5	55.3	46.6	55.4	56.1	62.6	68.5
Tennessee.....	64.1	37.0	31.3	106.1	67.9	87.1	84.5	88.9	91.5	98.3
Virginia.....	37.3	47.2	29.4	91.9	47.2	71.5	80.6	83.7	76.2	84.1
West Virginia.....	46.9	33.8	27.8	91.2	59.1	78.3	82.5	91.5	79.5	71.9
Wisconsin.....	28.5	18.1	30.7	42.3	44.3	66.5	65.4	72.6	74.6	88.1
Hawaii.....	11.3	11.0	10.5	17.6	24.4	100.1	102.3	118.2	141.1	148.7
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	17.6	19.2	13.2	37.7	22.0	56.8	62.1	62.7	74.0	72.8

State	Tuberculosis, all forms (23-32)					Cancer (45-53)				
	1932	1931	1930	1929	1928	1932	1931	1930	1929	1928
Total.....	60.4	64.8	68.2	72.8	77.3	100.7	97.6	96.5	95.5	95.8
Alabama.....	77.2	86.3	96.0	85.7	99.6	55.5	54.3	53.9	51.3	50.3
California.....	81.0	88.9	98.3	106.3	115.1	120.2	124.2	125.7	118.4	121.3
Connecticut.....	48.2	52.1	58.8	63.5	60.4	117.8	112.9	114.5	116.0	111.7
District of Columbia.....	121.5	120.2	116.8	116.6	120.6	146.7	135.2	136.7	131.8	127.2
Georgia.....	65.5	72.9	73.4	74.0	82.1	52.2	52.7	52.2	48.5	52.3
Idaho.....	28.6	29.8	32.9	42.5	37.4	76.6	66.4	61.4	78.8	74.3
Illinois.....	54.1	59.1	50.6	68.8	73.4	114.4	112.7	112.0	107.2	106.4
Indiana.....	57.3	57.6	63.6	70.2	70.0	105.2	100.6	99.9	99.8	100.5
Iowa.....	28.2	28.5	33.1	32.6	34.9	116.5	112.9	110.8	107.8	112.0
Kansas.....	32.5	37.0	36.8	37.8	40.0	104.2	97.0	96.4	92.6	90.1
Louisiana.....	72.7	81.5	84.1	86.3	87.7	67.1	68.2	68.0	64.4	64.7
Maryland.....	90.2	95.7	98.9	104.6	105.8	116.1	111.6	111.5	100.8	114.4
Michigan.....	48.2	53.3	59.8	60.1	67.6	93.3	90.6	90.7	93.3	92.5
Minnesota.....	39.2	40.0	46.3	54.5	56.0	124.2	121.3	119.1	113.9	114.1
Mississippi.....	62.6	72.1	78.4	74.2	95.6	50.2	48.7	46.8	44.5	52.3
Montana.....	55.0	61.3	62.3	65.7	66.2	92.9	74.5	78.9	87.5	83.2
Nebraska.....	20.3	24.6	24.5	29.9	20.3	100.6	98.5	100.9	94.5	96.5
New Jersey.....	60.6	65.1	60.3	73.1	72.9	112.9	113.4	107.1	109.3	105.1
New York.....	62.6	66.4	71.0	74.8	82.7	124.1	123.8	122.7	121.8	120.7
North Carolina.....	65.5	69.4	74.7	83.3	78.1	46.2	48.2	47.9	51.2	49.6
Ohio.....	54.9	62.0	63.0	69.8	73.3	100.8	105.2	104.6	106.1	106.1
Pennsylvania.....	52.5	56.4	59.9	66.1	71.4	102.1	98.9	94.9	103.0	102.4
South Carolina.....	65.5	70.7	76.5	78.1	85.4	41.6	45.3	39.7	42.5	44.6
South Dakota.....	45.1	43.7	48.6	53.9	66.0	80.7	82.7	72.9	68.0	71.8
Tennessee.....	94.7	107.2	115.7	120.3	129.6	56.8	57.1	58.2	56.0	58.3
Virginia.....	81.0	87.0	85.0	91.4	103.8	67.9	64.3	61.6	62.8	70.0
West Virginia.....	53.4	59.8	65.4	68.0	73.0	62.0	57.7	59.4	57.9	62.8
Wisconsin.....	44.9	48.1	50.5	53.3	58.5	116.4	115.8	112.8	110.0	112.2
Hawaii.....	94.3	98.2	102.3	110.4	124.0	71.5	87.2	59.6	64.5	62.2
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	70.1	76.7	81.3	87.3	90.6	92.1	85.4	79.5	78.8	77.6

TABLE 3.—Death rates for various causes per 100,000 population—Continued

State	Diabetes mellitus (50)					Cerebral hemorrhage, apoplexy (82, a, b)				
	1932	1931	1930	1929	1928	1932	1931	1930	1929	1928
Total.....	21.7	20.3	19.1	18.8	19.4	79.3	78.5	78.9	79.6	81.9
Alabama.....	10.5	10.8	8.8	9.0	9.7	61.8	61.4	65.5	64.5	63.7
California.....	20.8	19.2	18.1	19.0	18.9	77.8	78.6	81.9	80.2	86.2
Connecticut.....	25.1	21.9	17.9	17.5	23.4					
District of Columbia.....	28.2	25.1	26.6	27.7	27.8	107.5	105.7	99.2	83.8	107.2
Georgia.....	11.6	10.9	11.6	10.2	11.1	80.0	84.8	90.1	81.8	84.4
Idaho.....	12.7	12.5	7.8	12.8	11.5	79.9	95.3	71.3	62.2	57.4
Illinois.....	26.3	25.6	22.1	23.5	23.4	73.0	73.0	74.7	76.0	77.8
Indiana.....	18.5	16.4	15.7	15.0	21.5	108.7	105.7	108.1	108.4	111.2
Iowa.....	16.0	19.8	21.0	18.4	19.3	109.0	111.2	95.8	97.1	97.9
Kansas.....	22.1	21.9	20.9	21.4	20.4	101.2	94.8	99.7	106.9	113.1
Louisiana.....	13.7	12.8	12.1	11.2	11.8	60.2	57.5	61.8	60.3	64.9
Maryland.....	25.7	23.0	21.3	19.5	23.2	103.2	108.6	105.1	102.0	102.0
Michigan.....	21.9	19.1	18.1	19.7	19.0	84.1	87.7	89.9	93.6	97.0
Minnesota.....	22.2	19.5	18.2	18.6	20.2	77.8	75.4	79.5	75.3	78.3
Mississippi.....	7.6	7.8	8.9	7.3	10.0	61.9	64.3	66.6	64.9	62.3
Montana.....	15.8	15.4	16.2	15.2	18.0	70.1	68.0	66.6	59.1	65.6
Nebraska.....	22.8	21.2	20.6	21.5	22.4	93.0	84.4	84.5	88.4	83.3
New Jersey.....	26.0	23.9	23.1	23.0	24.5	77.3	79.4	80.4	83.4	88.6
New York.....	29.9	28.2	26.9	26.2	26.4	51.9	52.0	53.2	57.4	61.1
North Carolina.....	10.7	10.6	10.0	9.9	9.1					
Ohio.....	24.2	21.7	21.7	20.7	22.0	110.3	108.1	107.7	112.0	113.9
Pennsylvania.....	25.7	24.7	21.9	22.3	22.7	85.7	87.0	87.1	88.7	91.9
South Carolina.....	11.1	10.3	8.9	8.6	9.0					
South Dakota.....	17.3	20.6	16.9	18.8	18.2	67.0	64.1	61.3	55.0	55.2
Tennessee.....	10.1	10.6	10.8	10.2	9.4	65.6	60.0	62.9	63.0	66.4
Texas.....	15.8	14.9	14.3	11.9	12.3	91.0	97.7	95.8	89.4	92.6
Virginia.....	13.0	11.7	12.8	9.7	11.2	76.1	67.9	63.7	49.3	59.1
West Virginia.....	22.4	22.4	20.7	19.2	22.3	87.8	85.9	85.6	91.6	90.1
Wisconsin.....	9.5	12.3	13.0	12.6	7.2	51.8	50.7	48.3	53.9	61.9
Hawaii.....										
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	23.3	21.4	18.7	18.6	17.9	62.8	61.3	61.3		

State	Heart diseases (90-95)					Nephritis (130-132)				
	1932	1931	1930	1929	1928	1932	1931	1930	1929	1928
Total.....	219.5	211.7	209.6	215.1	214.6	84.4	83.7	88.0	90.7	92.9
Alabama.....	117.9	116.9	134.0	136.2	133.2	84.7	88.2	100.4	95.8	88.6
California.....	252.2	253.4	239.7	249.0	242.2	80.6	80.9	84.0	89.2	97.4
Connecticut.....	208.1	208.0	183.6	193.8	179.2	87.8	88.3	73.2	71.1	89.2
District of Columbia.....	330.6	300.2	315.9	325.5	314.8	140.4	146.2	160.4	162.6	156.7
Georgia.....	139.9	132.8	138.0	124.5	142.2	109.6	107.4	127.0	134.5	117.8
Idaho.....	161.2	159.7	174.6	163.1	140.7	43.3	38.7	39.2	61.3	66.4
Illinois.....	231.6	232.1	223.1	233.9	238.0	108.8	107.2	105.8	109.3	116.8
Indiana.....	174.0	167.9	182.5	197.4	189.6	69.7	74.3	84.9	80.9	81.8
Iowa.....	198.3	200.7	195.8	215.4	212.9	45.1	45.9	43.2	49.3	52.3
Kansas.....	178.0	153.9	171.5	163.7	175.3	100.0	95.3	102.7	90.5	94.4
Louisiana.....	182.5	178.0	199.1	191.9	183.8	102.5	108.6	112.0	108.2	112.7
Maryland.....	255.9	251.0	245.2	239.2	237.7	138.4	139.2	149.6	151.0	144.0
Michigan.....	217.9	204.4	229.6	245.8	218.6	57.8	58.8	63.7	66.1	67.9
Minnesota.....	193.6	177.9	173.4	155.3	153.8	54.7	50.8	52.2	56.2	57.7
Mississippi.....	84.2	94.3	104.3	97.2	123.6	68.7	84.7	97.1	95.6	113.0
Montana.....	158.7	139.6	139.4	169.2	160.1	71.4	66.7	73.1	68.0	61.7
Nebraska.....	171.4	159.1	159.4	166.0	171.5	72.0	67.9	58.6	68.5	65.2
New Jersey.....	231.0	234.3	232.1	246.0	258.6	91.0	96.3	102.2	99.5	103.4
New York.....	294.4	288.0	275.9	293.3	297.9	74.8	73.4	76.4	80.6	82.7
Ohio.....	237.5	230.3	225.3	227.1	222.7	78.6	74.0	78.4	84.7	88.2
Pennsylvania.....	238.4	233.5	231.6	236.2	237.8	93.0	92.7	104.3	104.8	111.9
South Carolina.....						125.6	121.2	112.6	105.4	113.1
South Dakota.....	150.3	127.4	123.5	126.5	121.5	41.7	39.1	45.7	53.7	40.2
Tennessee.....	98.6	108.4	120.3	128.9	124.1	67.2	69.6	75.9	71.6	79.3
Texas.....	198.3	188.3	178.2	176.7	198.5	119.5	101.5	108.3	103.0	119.6
Virginia.....	113.0	110.6	116.6	112.7	117.1	68.8	64.5	61.3	54.3	77.4
West Virginia.....	217.4	203.1	204.8	212.3	200.0	66.5	67.7	67.4	68.0	74.2
Wisconsin.....	100.1	105.7	121.4	118.2	112.9	60.2	68.4	66.9		
Hawaii.....										
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over, other (organic) heart only (95).....	157.4	150.1	147.1	149.0	144.4	69.4	68.1	69.2	70.6	71.8



**DEATHS DURING WEEK ENDED APRIL 15, 1933**

[From the Weekly Health Index issued by the Bureau of the Census, Department of Commerce]

	Week ended Apr. 15, 1933	Correspond- ing week, 1932
<b>Data from 85 large cities of the United States:</b>		
Total deaths.....	7,907	8,395
Deaths per 1,000 population, annual basis.....	11.1	12.0
Deaths under 1 year of age.....	543	671
Deaths under 1 year of age per 1,000 estimated live births <sup>1</sup> .....	46	56
Deaths per 1,000 population, annual basis, first 15 weeks of year.....	12.1	12.6
<b>Data from industrial insurance companies:</b>		
Policies in force.....	68,464,541	73,637,230
Number of death claims.....	12,859	16,103
Death claims per 1,000 policies in force, annual rate.....	9.8	11.4
Death claims per 1,000 policies, first 15 weeks of year, annual rate.....	11.0	10.6

<sup>1</sup> 1933, 81 cities; 1932, 80 cities.

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# PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

## UNITED STATES

### CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Weeks Ended April 22, 1933, and April 23, 1932

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Apr. 22, 1933, and Apr. 23, 1932

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932
<b>New England States:</b>								
Maine.....	1		3	2	1	182	0	1
New Hampshire.....		1	1		4	29	0	0
Vermont.....		1			58	119	0	0
Massachusetts.....	25	20	5	4	445	733	0	3
Rhode Island.....	3	11			1	139	0	0
Connecticut.....	5	8	10	8	265	160	0	0
<b>Middle Atlantic States:</b>								
New York.....	65	116	11	134	3,126	2,271	6	10
New Jersey.....	24	30	10	22	2,290	739	0	1
Pennsylvania.....	63	65			1,353	2,265	4	10
<b>East North Central States:</b>								
Ohio.....	24	32	15	20	768	1,145	0	2
Indiana.....	17	33	18	50	205	88	2	9
Illinois.....	31	73	70	124	726	1,047	27	6
Michigan.....	17	19	6	12	986	1,966	0	4
Wisconsin.....	4	15	40	101	425	1,055	1	0
<b>West North Central States:</b>								
Minnesota.....	2	7		5	1,051	22	0	1
Iowa.....	10	10			14	2	2	0
Missouri.....	21	20	6	13	211	109	4	1
North Dakota.....	1	5			73	38	0	0
South Dakota.....	3	3			5	11	1	0
Nebraska.....	12	4			22	3	5	1
Kansas.....	14	6	1	1	339	549	0	0
<b>South Atlantic States:</b>								
Delaware.....	7	4		1	7		1	0
Maryland.....	6	16	8	51	15	27	1	0
District of Columbia.....	4	7	2	3	8	12	2	0
Virginia.....	17				341		2	
West Virginia.....	10	10	13	131	65	300	0	1
North Carolina.....	12	11	21	172	525	699	1	0
South Carolina.....	7	6	273	1,484	286	150	0	0
Georgia.....	5	14		142	85	34	0	5
Florida.....	7	20	2	5	97	3	0	0

See footnotes at end of table.

*Cases of certain communicable diseases reported by telegraph by State health officers  
for weeks ended Apr. 22, 1933, and Apr. 23, 1932—Continued*

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932
<b>East South Central States:</b>								
Kentucky.....	9	6	25	178	128	82	1	1
Tennessee.....	11	11	52	342	69	237	0	4
Alabama.....	13	17	36	140	58	21	1	2
Mississippi.....	3	8					0	0
<b>West South Central States:</b>								
Arkansas.....	5	4	21	183	305	6	0	4
Louisiana.....	12	17	2	13	55	86	1	2
Oklahoma.....	6	25	28	151	195	38	4	0
Texas.....	48	29	234	300	1,635	383	2	0
<b>Mountain States:</b>								
Montana.....		1	1	5	42	73	0	1
Idaho.....		1	6		48	1	0	0
Wyoming.....					9	23	1	0
Colorado.....	4	10	31		8	125	0	0
New Mexico.....	2	9	1	3	10	77	1	0
Arizona.....		7		6	92	1	0	2
Utah.....		1			7	1	0	0
<b>Pacific States:</b>								
Washington.....	2	4		4	55	342	1	0
Oregon.....	3	2	31	40	87	293	0	0
California.....	42	83	19	65	1,229	619	4	3
<b>Total.....</b>	<b>577</b>	<b>802</b>	<b>1,002</b>	<b>3,815</b>	<b>17,829</b>	<b>16,175</b>	<b>75</b>	<b>74</b>
Division and State	Polio-myelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932
<b>New England States:</b>								
Maine.....	0	0	34	41	0	0	3	1
New Hampshire.....	0	0	49	48	0	0	0	1
Vermont.....	0	0	12	14	0	4	0	1
Massachusetts.....	0	0	396	473	0	0	5	2
Rhode Island.....	0	0	32	63	0	0	0	2
Connecticut.....	0	0	118	119	2	0	1	0
<b>Middle Atlantic States:</b>								
New York.....	0	2	703	1,617	0	10	12	11
New Jersey.....	2	1	331	304	0	0	3	1
Pennsylvania.....	1	0	840	596	0	0	3	8
<b>East North Central States:</b>								
Ohio.....	1	0	724	280	3	13	7	11
Indiana.....	0	0	152	150	2	6	1	2
Illinois.....	3	1	469	442	12	3	9	2
Michigan.....	0	0	493	465	0	3	4	5
Wisconsin.....	0	0	137	63	19	0	3	1
<b>West North Central States:</b>								
Minnesota.....	0	0	69	155	3	3	0	3
Iowa.....	0	2	20	62	17	44	0	1
Missouri.....	0	1	101	68	3	6	0	3
North Dakota.....	0	0	12	16	0	0	1	0
South Dakota.....	0	0	16	3	0	4	1	2
Nebraska.....	0	0	49	20	1	10	0	0
Kansas.....	0	0	60	65	0	3	2	0
<b>South Atlantic States:</b>								
Delaware.....	0	0	14	16	0	0	0	0
Maryland.....	0	0	88	108	0	0	3	8
District of Columbia.....	0	0	15	26	0	0	0	0
Virginia.....	0		46		1		6	
West Virginia.....	0	0	21	29	1	1	4	3
North Carolina.....	0	0	47	53	1	3	2	6
South Carolina.....	1	0	5	4	3	0	5	6
Georgia.....	1	0	6	16	1	1	6	9
Florida.....	0	0	9	8	0	0	1	10

See footnotes at end of table.

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Apr. 22, 1933, and Apr. 23, 1932—Continued*

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932	Week ended Apr. 22, 1933	Week ended Apr. 23, 1932
<b>East South Central States:</b>								
Kentucky.....	0	0	43	92	0	1	14	0
Tennessee.....	1	0	47	27	1	16	4	12
Alabama.....	1	1	8	14	2	25	12	13
Mississippi.....	0	0	4	8	0	29	3	5
<b>West South Central States:</b>								
Arkansas.....	0	0	1	4	8	3	3	5
Louisiana.....	0	3	15	15	1	3	21	14
Oklahoma <sup>1</sup> .....	0	0	12	31	2	12	0	16
Texas <sup>2</sup> .....	0	1	69	36	23	87	6	6
<b>Mountain States:</b>								
Montana <sup>3</sup> .....	0	0	22	13	0	5	1	1
Idaho.....	0	0	0	4	5	1	1	0
Wyoming <sup>4</sup> .....	0	0	12	4	0	0	0	1
Colorado.....	0	0	22	29	3	1	0	1
New Mexico.....	0	0	10	16	0	1	4	1
Arizona.....	0	0	3	9	0	0	2	1
Utah <sup>5</sup> .....	0	0	1	2	0	0	0	1
<b>Pacific States:</b>								
Washington.....	0	0	47	31	22	14	0	0
Oregon.....	0	0	30	19	2	16	1	4
California <sup>6</sup> .....	3	5	165	182	63	16	7	11
<b>Total.....</b>	<b>14</b>	<b>17</b>	<b>5,579</b>	<b>5,860</b>	<b>201</b>	<b>344</b>	<b>161</b>	<b>197</b>

<sup>1</sup> New York City only.

<sup>2</sup> Week ended Friday.

<sup>3</sup> Typhus fever, week ended Apr. 22, 1933, 12 cases: 1 case in South Carolina, 4 cases in Georgia, and 7 cases in Texas.

<sup>4</sup> Figures for 1933 are exclusive of Oklahoma City and Tulsa and for 1932 are exclusive of Tulsa only.

<sup>5</sup> Rocky mountain spotted fever, week ended Apr. 22, 1933, 5 cases: 2 cases in Montana, 2 cases in Wyoming and 1 case in California.

## SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week:

State	Menin- gococ- cus menin- gitis	Diph- theria	Influen- za	Malaria	Measles	Pellag- ra	Polio- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
<b>February 1933</b>										
Hawaii Territory.....		16	113		1		0	3	0	14
New Hampshire.....		1	15				0	180	0	0
<b>March 1933</b>										
Florida.....	3	41	71	15	185	10	1	37	0	49
Georgia.....	7	40	1,417	62	159	24	0	37	30	11
Illinois.....	97	186	335	1	1,753	2	2	2,322	75	8
Louisiana.....	9	57	108	15	223	6	0	59	3	49
Maryland.....	2	33	170		79		1	493	0	22
Michigan.....	16	103	44	3	5,360		3	2,565	6	15
Minnesota.....	5	61	13		6,111		0	310	0	4
New Hampshire.....			10				0	118	0	1
New Jersey.....	8	96	105		7,350		0	1,540	1	14
Rhode Island.....		14	25		7		0	190	0	
South Carolina.....		55	3,528	426	713	156	3	26		9
South Dakota.....	7	26	15		30		2	77	3	14
West Virginia.....	1	47	119		756		2	127		20



February 1933		Cases		Cases	
Hawaii Territory:	Cases	Lead poisoning:	Cases	Tetanus:	Cases
Chicken pox.....	51	Illinois.....	5	Georgia.....	2
Conjunctivitis, follicular.....	18	New Jersey.....	1	Illinois.....	1
Dysentery, bacillary.....	2	Leprosy:		Louisiana.....	1
Hookworm disease.....	41	Louisiana.....	1	Maryland.....	2
Leprosy.....	5	Lethargic encephalitis:		South Carolina.....	1
Mumps.....	6	Georgia.....	1	Trachoma:	
Plague.....	1	Illinois.....	7	Georgia.....	21
Tetanus.....	2	Minnesota.....	2	Illinois.....	1
Trachoma.....	5	New Jersey.....	3	New Jersey.....	13
Whooping cough.....	106	South Carolina.....	8	South Dakota.....	1
March 1933		Mumps:		Trichinosis:	
Anthrax:		Florida.....	14	Illinois.....	3
New Jersey.....	1	Georgia.....	273	New Jersey.....	2
Chicken pox:		Illinois.....	439	Tularemia:	
Florida.....	180	Louisiana.....	4	Georgia.....	4
Georgia.....	205	Maryland.....	740	Illinois.....	4
Illinois.....	2,317	Michigan.....	1,672	Louisiana.....	5
Louisiana.....	38	New Jersey.....	1,721	Minnesota.....	1
Maryland.....	693	Rhode Island.....	60	South Carolina.....	2
Michigan.....	2,223	South Carolina.....	129	Typhus fever: <sup>1</sup>	
Minnesota.....	393	South Dakota.....	23	Florida.....	5
New Jersey.....	1,964	West Virginia.....	19	Georgia.....	6
Rhode Island.....	144	Ophthalmia neonatorum:		Illinois.....	2
South Carolina.....	136	Illinois.....	8	South Carolina.....	2
South Dakota.....	140	Maryland.....	1	Undulant fever:	
West Virginia.....	260	Minnesota.....	2	Georgia.....	1
Dengue:		New Jersey.....	3	Illinois.....	6
South Carolina.....	9	Rhode Island.....	1	Louisiana.....	4
Diarrhea:		South Carolina.....	15	Maryland.....	4
Maryland.....	1	Paratyphoid fever:		Michigan.....	1
South Carolina.....	438	Louisiana.....	3	Minnesota.....	8
Dysentery:		Minnesota.....	1	New Jersey.....	1
Florida.....	2	South Carolina.....	4	West Virginia.....	1
Georgia.....	7	West Virginia.....	1	Vincent's angina:	
Illinois (amebic).....	2	Puerperal septicaemia:		Illinois.....	127
Maryland.....	3	Illinois.....	10	Maryland.....	14
Minnesota.....	1	Rabies in animals:		Whooping cough:	
German measles:		Illinois.....	31	Florida.....	113
Illinois.....	68	Louisiana.....	4	Georgia.....	226
Maryland.....	26	Maryland.....	6	Illinois.....	841
Michigan.....	4,354	New Jersey.....	20	Louisiana.....	91
New Jersey.....	110	South Carolina.....	15	Maryland.....	133
Rhode Island.....	1	Rabies in man:		Michigan.....	1,331
Hookworm disease:		Illinois.....	2	Minnesota.....	783
Georgia.....	484	Louisiana.....	1	New Jersey.....	666
Louisiana.....	5	Scabies:		Rhode Island.....	187
South Carolina.....	104	Maryland.....	2	South Carolina.....	282
Impetigo contagiosa:		Septic sore throat:		South Dakota.....	20
Illinois.....	1	Georgia.....	23	West Virginia.....	100
Maryland.....	26	Illinois.....	18		
		Louisiana.....	1		
		Maryland.....	10		
		Michigan.....	44		
		Rhode Island.....	2		

<sup>1</sup> The report of 25 cases of typhus fever in Tennessee in March, PUBLIC HEALTH REPORTS, Apr. 21, 1933, p. 431, is erroneous, no cases of typhus fever having occurred.

## WEEKLY REPORTS FROM CITIES

City reports for week ended Apr. 15, 1933

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
Maine:											
Portland	0	1	0	0	1	2	0	1	1	11	18
New Hampshire:											
Concord	0		0	0	0	0	0	0	0	0	13
Manchester	0		0	0	1	2	0	0	0	0	10
Nashua	0		0	1	0	0	0	0	0	0	
Vermont:											
Barre	0		0	0	0	0	0	1	0	15	1
Burlington	0		0	1	0	7	0	0	0	0	3
Massachusetts:											
Boston	12	1	1	204	23	87	0	5	0	53	213
Fall River	0		0	1	0	9	0	0	0	11	30
Springfield	0	1	0	1	2	6	0	2	0	8	39
Worcester	5		0	28	4	24	0	1	0	1	49
Rhode Island:											
Pawtucket	3		0	0	0	1	0	0	0	5	
Providence	0		0	0	7	19	0	3	0	11	71
Connecticut:											
Bridgeport	1		0	32	2	15	0	0	0	1	27
Hartford	0		0	15	1	22	0	2	0	4	35
New Haven	0		1	0	2	11	0	2	0	8	45
New York:											
Buffalo	4		0	59	13	60	0	3	0	32	114
New York	35	28	10	2,475	175	395	0	101	4	133	1,599
Rochester	0		0	1	6	28	0	2	0	14	71
Syracuse	0		0	1	5	29	0	2	0	11	55
New Jersey:											
Camden	0	1	0	17	2	12	0	1	0	0	34
Newark	1	3	0	520	15	35	0	3	0	18	70
Trenton	0		0	18	2	13	0	4	0	3	32
Pennsylvania:											
Philadelphia	5	2	2	227	28	111	0	32	0	4	447
Pittsburgh	2	3	1	5	17	66	0	8	0	23	153
Reading	4		0	33	1	16	0	1	0	5	30
Scranton	2			0		20	0		0	2	
Ohio:											
Cincinnati	0	1	0	7	7	38	0	8	0	12	115
Cleveland	11	57	1	8	14	190	0	13	0	25	176
Columbus	2	1	1	52	4	26	0	7	1	0	88
Toledo	4	1	1	382	3	116	0	6	0	7	64
Indiana:											
Fort Wayne	3		1	0	0	5	0	0	0	0	28
Indianapolis	2		1	92	13	26	0	4	0	16	
South Bend	0		0	0	3	5	0	0	0	1	18
Terre Haute	0		0	0	2	17	0	1	0	1	26
Illinois:											
Chicago	6	2	4	585	65	371	2	41	1	7	680
Cicero	0		0	0	0	4	0	0	0	0	6
Springfield	2		0	0	2	6	0	1	0	0	20
Michigan:											
Detroit	14	1	3	678	15	196	0	20	0	111	261
Flint	0	7	0	246	5	7	0	1	0	5	24
Grand Rapids	0		1	9	3	10	0	0	0	34	31
Wisconsin:											
Kenosha	0		0	1	0	6	0	0	0	1	6
Madison	0			139		2	0		0	2	
Milwaukee	1	2	2	3	7	21	0	4	0	43	101
Racine	0		0	2	0	6	0	1	0	16	18
Superior	0		0	0	0	0	0	0	0	7	7
Minnesota:											
Duluth	0		1	72	0	0	0	1	0	31	19
Minneapolis	1		1	46	6	32	0	4	0	10	79
St. Paul	0	1	1	547	4	25	0	2	0	59	65
Iowa:											
Des Moines	5			0		11	0		0	0	27
Sioux City	1			2		2	0		0	2	
Waterloo	1			0		3	0		0	0	
Missouri:											
Kansas City	1		0	117	7	36	0	4	0	2	87
St. Joseph	2		0	76	0	1	0	0	0	1	
St. Louis	12	2	1	16	5	23	0	11	0	0	191



## City reports for week ended Apr. 15, 1933—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Idaho:											
Boise.....	0		0	15	0	1	2	0	0	0	1
Colorado:											
Denver.....	1	37	1	0	7	12	0	2	2	1	64
Pueblo.....	0		0	0	0	1	0	1	0	4	12
New Mexico:											
Albuquerque.....	0		0	0	3	0	0	2	0	19	15
Utah:											
Salt Lake City.....	0		1	1	2	2	0	0	1	14	34
Nevada:											
Reno.....	0		0	0	0	0	0	0	0	0	9
Washington:											
Seattle.....	0			11		8	0		0	4	
Spokane.....	0			1		1	2		0	0	
Tacoma.....	0		0	0	2	2	1	1	0	1	26
Oregon:											
Portland.....	0	2	1	3	0	10	4	0	1	5	61
Salem.....	0	2		14		1	0		0	0	
California:											
Los Angeles.....	23	7	1	513	7	49	18	26	0	63	273
Sacramento.....	0		0	4	2	0	0	1	3	44	28
San Francisco.....	0	31	0	2	11	11	0	11	0	69	158

State and city	Meningococcus meningitis		Polio-myelitis cases	State and city	Meningococcus meningitis		Polio-myelitis cases
	Cases	Deaths			Cases	Deaths	
New York:				District of Columbia:			
Buffalo.....	1	0	0	Washington.....	2	0	0
New York.....	3	0	1	South Carolina:			
Pennsylvania:				Greenville.....	0	1	0
Pittsburgh.....	3	1	0	Georgia:			
Indiana:				Atlanta.....	1	0	0
Indianapolis.....	0	0	1	Savannah.....	0	0	1
Illinois:				Arkansas:			
Chicago.....	11	10	1	Fort Smith.....	1	0	0
Michigan:				Louisiana:			
Detroit.....	0	1	0	New Orleans.....	1	1	0
Grand Rapids.....	0	1	0	Texas:			
Minnesota:				Dallas.....	1	1	0
Duluth.....	0	1	0	Houston.....	0	1	0
Iowa:				Utah:			
Des Moines.....	1	0	0	Salt Lake City.....	1	0	0
Sioux City.....	1	0	0	Washington:			
Missouri:				Seattle.....	0	0	1
St. Louis.....	1	1	0	California:			
Nebraska:				Los Angeles.....	0	1	1
Omaha.....	4	0	0	San Francisco.....	1	1	0
Maryland:							
Baltimore.....	1	1	0				

*Lethargic encephalitis*.—Cases: New York, 2; Pittsburgh, 1; Chicago, 2; Memphis, 1.

*Pellagra*.—Cases: Wheeling, 1; Miami, 1; Birmingham, 4; Los Angeles, 3.

*Typhus fever*.—Cases: Tampa, 1.



## FOREIGN AND INSULAR

### CANADA

*Provinces—Communicable diseases—2 weeks ended April 8, 1933.*—The Department of Pensions and National Health of Canada reports cases of certain communicable diseases for the 2 weeks ended April 8, 1933, as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba <sup>1</sup>	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis		2		1	5				2	10
Chicken pox				465	510	30	48	5	122	1,180
Diphtheria		7	1	45	29	4	15		3	104
Erysipelas				28	7		3	2	3	43
Influenza		31		6	11				3	51
Measles	20	41	8	324	439	7		14	7	860
Mumps		3			530	45	18		57	653
Paratyphoid fever					2					2
Pneumonia		4			8		14		5	31
Poliomyelitis				1						1
Scarlet fever		18	7	93	140	14	30	9	6	317
Smallpox					3		2		6	11
Trachoma									2	2
Tuberculosis	1	2	25	156	102	8	16	10	63	383
Typhoid fever			1	29	13	1			4	48
Undulant fever					6		1			7
Whooping cough				183	176	44	34	8	34	479

<sup>1</sup> Report from Manitoba for week ended Apr. 8 not included.

*Ontario Province—Communicable diseases—4 weeks ended March 25, 1933.*—The Department of Health of the Province of Ontario, Canada, reports certain communicable diseases for the 4 weeks ended March 25, 1933, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Cerebrospinal meningitis	1	1	Poliomyelitis	1	
Chicken pox	1,226	2	Puerperal septicemia		1
Diphtheria	47	2	Scarlet fever	299	4
Dysentery	1		Septic sore throat	6	1
Erysipelas	14	1	Smallpox	6	
German measles	9		Syphilis	290	1
Gonorrhea	222		Trachoma	2	
Influenza	115	17	Tuberculosis	179	46
Measles	1,106	3	Typhoid fever	20	1
Mumps	1,006		Undulant fever	15	
Paratyphoid fever	9		Whooping cough	513	
Pneumonia		125			

## CUBA

*Provinces—Communicable diseases—4 weeks ended March 4, 1933.*—During the 4 weeks ended March 4, 1933, cases of certain communicable diseases were reported in the provinces of Cuba as follows:

Disease	Pinar del Rio	Habana	Matanzas	Santa Clara	Camaguey	Oriente	Total
Chicken pox.....	2	5		1	1		9
Diphtheria.....		10		4			14
Hookworm disease.....				1			1
Malaria.....		8	88	186	90	72	444
Measles.....	2	2	3	25	1	2	35
Tuberculosis.....	8	11	2	10	8	12	51
Typhoid fever.....	1	15	2	24	13	12	67

## ITALY

*Communicable diseases—4 weeks ended October 16, 1932.*—During the 4 weeks ended October 16, 1932, cases of certain communicable diseases were reported in Italy as follows:

Disease	Sept. 19-25		Sept. 26-Oct. 2		Oct. 3-9		Oct. 10-16	
	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected
Anthrax.....	39	33	49	43	53	45	29	28
Cerebrospinal meningitis.....	2	2	4	4	6	6	5	5
Chicken pox.....	32	26	40	30	34	27	55	35
Diphtheria and croup.....	430	234	540	291	539	267	754	338
Dysentery.....	29	19	68	29	73	34	51	31
Lethargic encephalitis.....	1	1	2	2	2	2	1	1
Measles.....	334	119	427	138	304	102	558	133
Poliomyelitis.....	31	27	40	33	19	17	27	21
Scarlet fever.....	413	167	537	180	486	176	573	215
Smallpox.....					2	1		
Typhoid fever.....	1,932	747	2,327	877	1,655	706	2,073	785

## YUGOSLAVIA

*Communicable diseases—March 1933.*—During the month of March 1933 certain communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax.....	38	9	Poliomyelitis.....	8	3
Cerebrospinal meningitis.....	12	4	Scarlet fever.....	222	17
Diphtheria.....	624	105	Sepsis.....	10	4
Dysentery.....	35	7	Tetanus.....	25	13
Erysipelas.....	125	10	Typhoid fever.....	245	28
Measles.....	912	16	Typhus fever.....	122	9
Paratyphoid fever.....	8	2			

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER**

(NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for Apr. 28, 1933, pp. 459-470. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued May 26, 1933, and thereafter, at least for the time being, in the issue published on the last Friday of each month.)

**Cholera**

*Philippine Islands.*—During the week ended April 22, 1933, 3 cases of cholera with 4 deaths were reported at Ormoc, Leyte Province, Philippine Islands.

**Plague**

*Bolivia.*—During the last 2 weeks of February 1933 an outbreak of plague appeared in several parts of the Province of Tomina, Department of Chuquisaca. The number of cases is unknown. The mortality is said to be as high as 80 percent. A sanitary cordon had been established and all prophylactic measures were being taken.

*Peru.*—During the month of March 1933, 7 cases of plague, with 7 deaths, were reported in Peru. The cases occurred in the Departments of Lambayeque, Libertad, and Lima.

**Smallpox**

*Bolivia.*—During the month of February 1933, 39 cases of smallpox were reported in La Paz, Bolivia.

**Typhus Fever**

*Bolivia.*—During the month of February 1933 typhus fever was reported in Bolivia as follows: La Paz, 33 cases; Ulla-Ulla and Guaqui, several cases; Potosi, 8 cases; and Santa Cruz, some isolated cases.

*Chile.*—From January 1 to February 4, 1933, 365 cases (15 suspected cases) of typhus fever were reported in Chile. Two cases were reported in Antofagasta, 9 in Concepcion, 1 in Santiago, and 4 in Talcahuano.